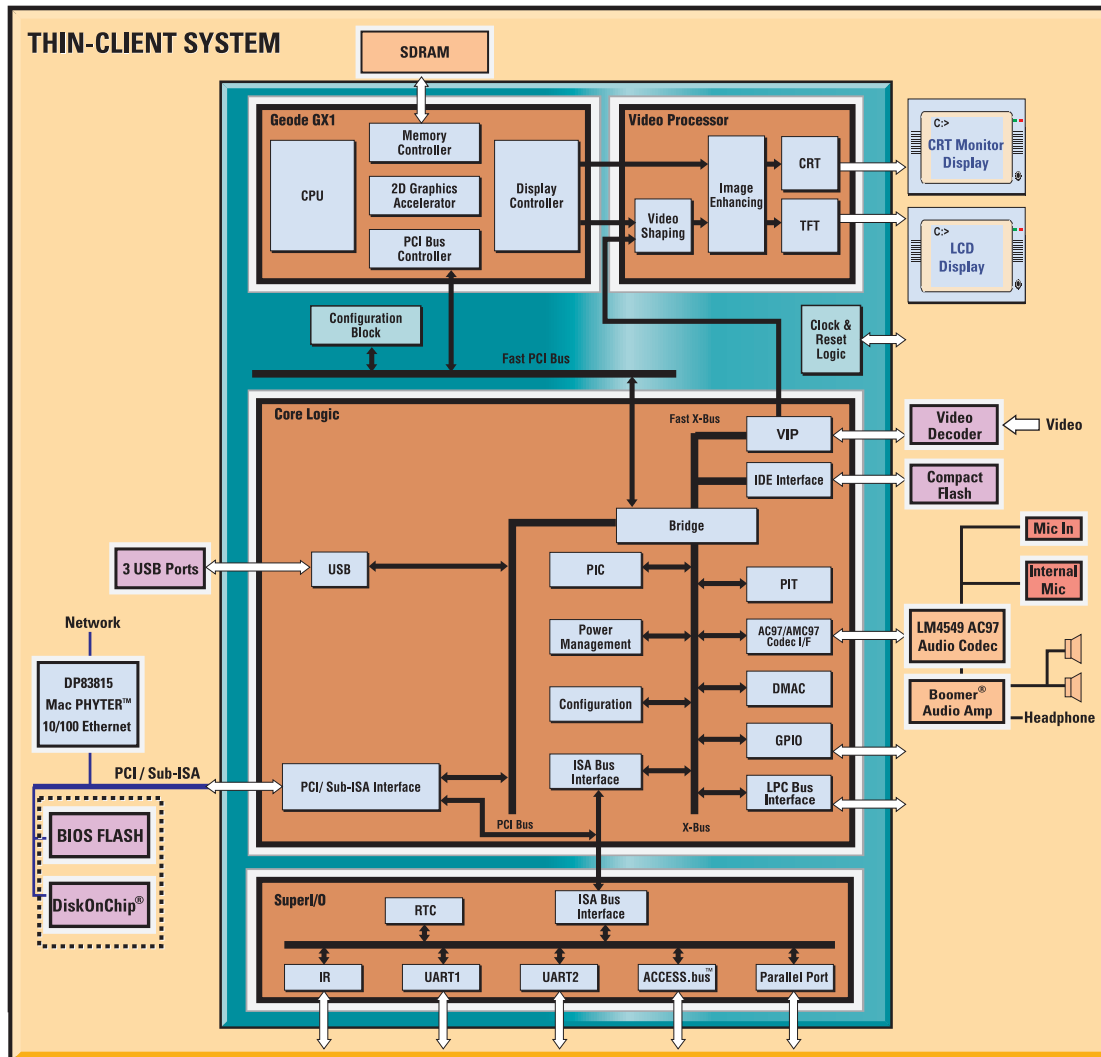


Geode™ SC2200

Integrated Processor



The National Semiconductor Geode™ SC2200 processor is a member of the National Information Appliances on-a-Chip family of fully integrated x86 system chips. The SC2200 single-chip processor includes a Geode GX1 32-bit x86-compatible processor, a CRT and TFT display processor, core logic, and a SuperI/O block. These features, combined with the small form factor and low power consumption, make it ideal as the core of a thin-client computer.

In particular, the SC2200 processor is an optimal solution for thin clients that are integrated into a Flat Panel Display (FPD).

The integrated architecture of the Geode SC2200 processor simplifies system design by reducing component count, the size of the main system board, and overall system power consumption. It can significantly lower overall system costs while improving time-to-market.

Thin Client

Product Overview

Information Appliances - a new industry

As the world moves away from all-purpose computers and toward a new class of information appliances, National is leading the way with systems-on-a-chip.

These highly integrated chips vastly simplify the design, manufacture, and power requirements of a whole new class of information appliances.

From enterprises to educational institutions, thin clients are becoming the next generation of computing. They enable organizations to reduce costs, improve reliability, deploy applications more quickly, and scale technology to meet growing information needs.

For the full range of devices available from National, visit our web site:

ia.national.com

Technical Specifications

Primary Components

- The SC2200 is based on the Geode GX1 integrated processor core which combines advanced CPU performance with MMX™ support, fully accelerated 2D graphics, a 64-bit synchronous DRAM (SDRAM) interface, and an internal PCI bus controller.
- Low power consumption CRT and TFT display processor, with a hardware video accelerator for scaling, filtering, and color space conversion.
- Core logic includes PC AT functionality, a Universal Serial Bus (USB) interface, ACPI 1.0 compliant power management, and an audio codec interface.
- SuperI/O block, including two serial ports, an infrared (IR) port, a parallel port, an ACCESS.bus™ interface, and a Real Time Clock (RTC).

The block diagram on the previous page shows the relationships between the functional blocks in the Geode SC2200 processor.

Outstanding Features

- 32-bit x86 processor, up to 266 MHz, with MMX instruction set support
- 64-bit SDRAM memory controller supporting up to 100 MHz operation
- CRT interface:
 - 1280 x 1024 non-interlaced CRT @8 bpp, up to 75 Hz
 - 1024 x 768 non-interlaced CRT @16 bpp, up to 85Hz
- CCIR-656 Video Input Port (VIP) with direct video for full screen display
- Three RS232 serial port controllers, UART1, UART2 and UART3, including fast infrared functionality
- TFT interface: 1024 x 768 non-interlaced TFT @ 16 bpp graphics, up to 60 Hz
- PC AT functionality
- PCI bus controller
- Low Pin Count (LPC) Bus interface, specification rev. 1.0 compatible
- Three OpenHCI 1.0 compliant USB ports
- 2D graphics accelerator
- AC97/AMC97 2.0 compliant audio controller
- Virtual System Architecture® (VSA™) support
- Power management, ACPI 1.0 compliant
- IDE channel for up to 2 external IDE devices; ATA-33 compliant
- Real Time Clock (RTC)
- 432 enhanced BGA package

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